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(56) Documents Cited

GB 2176765 A

GB 1349294 A

GB 0877321 A

GB 0798338 A

WO 96/22919 A1

US 3580427 A

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UK CL (Edition P) B8D DSA DSR1 DSR2 DSS DSX1

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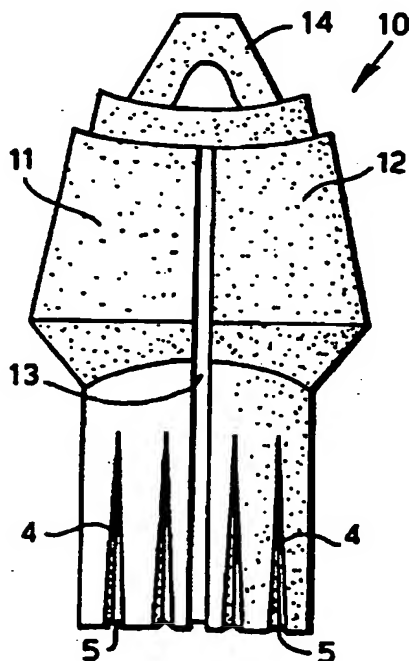
ONLINE:WPI

(54) Abstract Title

Dispensing containers

(57) A liquid dispensing container comprises a base, sidewall means, at least one dispensing outlet, and a bellows (4,5) formed in the sidewall means. The bellows (4,5) expels product from the at least one dispensing outlet (14) in response to transverse compression of the sidewall means. The container may include two compartments (11,12), preferably integrally injection moulded with a connecting web (13).

Fig.4.



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Fig.1.

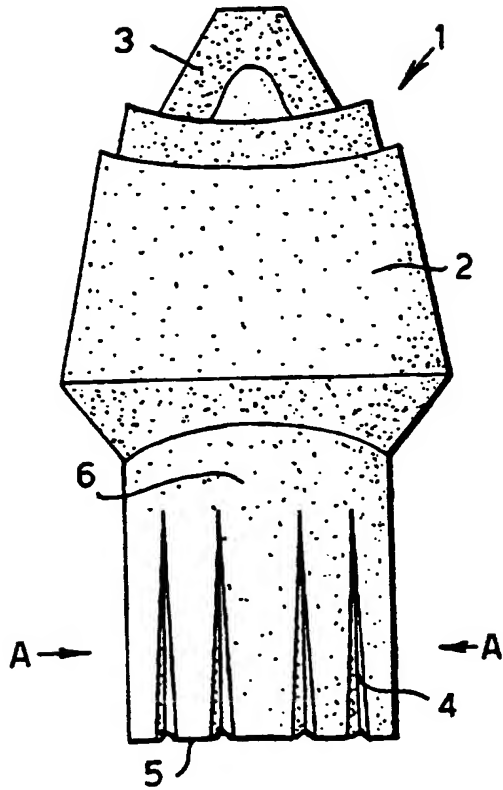


Fig.2.

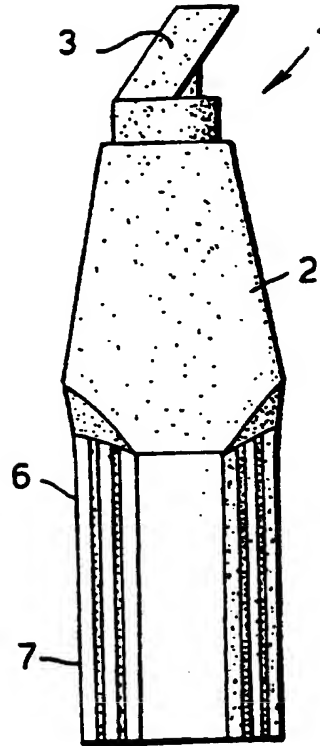


Fig.3.

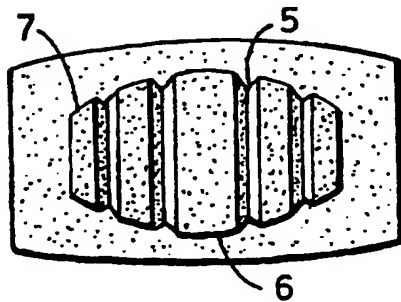


Fig.4.

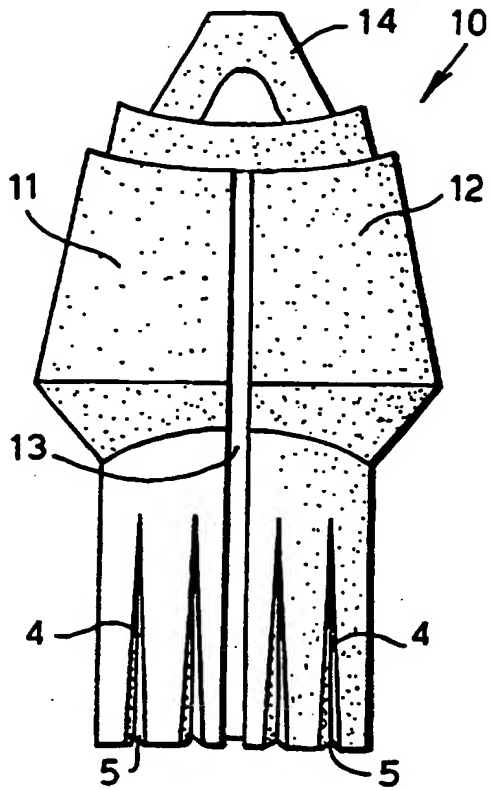


Fig.5.

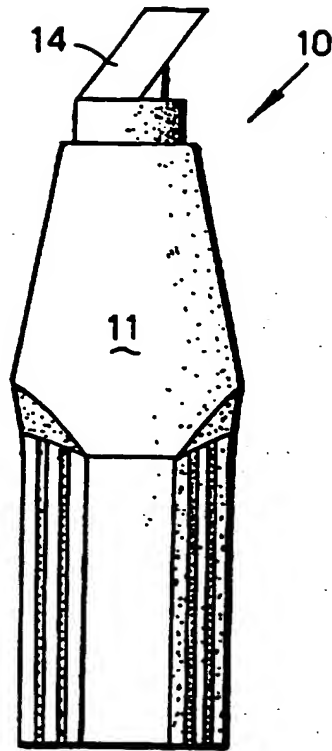
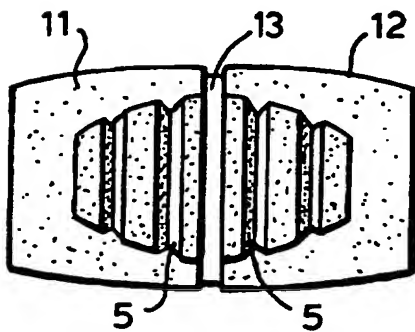


Fig.6.



A CONTAINERINTRODUCTION

- 5 The invention relates to a container having at least one dispensing outlet. In particular, the invention relates to dual compartment containers.

STATEMENTS OF INVENTION

- 10 According to the invention there is provided container having at least one dispensing outlet, the container being adapted to provide a bellows action, ideally a transverse bellows action, to expel product from the at least one
15 dispensing outlet.

Preferably, the bellows action is provided by at least one collapsible formation formed in a sidewall of the container.

- 20 Ideally, the container comprises a base and front and rear walls, and wherein the at least one collapsible formation is vertically disposed along the front and rear walls of the container.

- 25 Typically, the collapsible formation on the front and rear walls are connected by a collapsible formation disposed along the base.

- 30 In one embodiment of the invention, the at least one collapsible formation comprises a longitudinal v-shaped depression, wherein the depression tapers towards an upper end of the formation.

- 35 Typically, the at least one collapsible formation is disposed along a lower portion of the container.

Preferably the container comprises a plurality of collapsible formations.

- 5 The invention also provides a multi-compartment container comprising at least first and second compartments, at least one of the compartments comprising a container according to the invention. In one embodiment of the invention, the at least first and second compartments are connected by a
10 connecting web. Ideally, the first and second compartments and the connecting web are molded, ideally injection molded, in one piece. Typically an outlet of each compartments is connected to a common dispensing nozzle which optionally mixes product from each compartments prior to dispensing a
15 unitary mixed product stream.

DETAILED DESCRIPTION

- 20 The invention will be more clearly understood from the following description of some embodiments thereof, given by example only, with reference to the accompanying drawings in which:-

25 Fig. 1 is a front elevational view of a container according to the invention;

Fig. 2 is a side elevational view of the container of Fig. 1;

30 Fig. 3 is a bottom plan view of the container of Fig. 1;

Fig. 4 is a front elevational view of a dual compartment container according to the invention;

Fig. 5 is a side elevational view of the container of Fig. 4; and

Fig. 6 is a bottom plan view of the container of Fig. 4.

5 Referring to the drawings, and initially to Figs. 1 to 3 thereof, there is illustrated a container according to the invention, indicated generally by the reference numeral 1, and comprising a container body 2 having an outlet (not
10 shown) connected to a dispensing nozzle 3. In this embodiment, the container 1 is adapted to provide a transverse bellows action to expel product from the dispensing outlet by means of four collapsible formations 4
15 4 comprising a v-shaped depression 5 which is vertically disposed along lower front and rear walls 6,7 of the container, the vertical depressions being connected by means of a corresponding depression 8 formed in the base. The depressions 5 in the front and rear walls 6,7 taper
20 towards each upper end thereof. In use, and referring to Fig. 1, product is dispensed from the container 1 by inverting the container and compressing a lower portion of the container in the direction of the arrows marked A, whereby the portion of the container will partially collapse
25 due to the collapsible formations 4. Upon releasing the compression pressure, the container will expand to its initial shape.

30 Referring to Figs. 4 to 6 there is illustrated a further embodiment of the invention which in this instance comprises a dual compartment container, indicated generally by the reference numeral 10, in which parts similar to those of the previous embodiment are assigned the same reference
35 numerals. In this embodiment, the dual compartment container 10 comprises a first and second compartment 11, 12

respectively, joined by means of a connecting web 13, each compartment having a bellows formation similar to that described for the previous embodiment. Each compartment includes a dispensing opening (not shown), both of which
5 openings are connected to a common dispensing nozzle 14.

The first and second compartments 11, 12 and the connecting web 13 are injection molded in one piece. The use of this embodiment is similar to the previous embodiment described above.

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The invention is not limited to the embodiments hereinbefore described which may be varied in both construction and detail.

CLAIMS

1. A container for dispensing liquids, the container comprising a base, sidewall means, at least one dispensing outlet, and a bellows formed in said sidewall means, wherein the bellows expels product from the at least one dispensing outlet in response to transverse compression of the sidewall means.
2. A container as claimed in claim 1 in which the bellows comprises one or more collapsible formations formed in the sidewall means.
3. A container as claimed in claim 2 in which the sidewall means comprises front and rear walls, and wherein each collapsible formation is vertically formed along the front and rear walls of the container.
4. A container as claimed in claim 3 in which each collapsible formation on the front and rear walls is connected by a collapsible formation disposed along the base.
5. A container as claimed in claim 4 wherein each collapsible formation comprises a longitudinal v-shaped depressions, wherein the depressions tapers towards an upper end thereof.
6. A container as claimed in any preceding claims in which the bellows is disposed along a lower portion of the container.
7. A multi-compartment container comprising at least first and second compartments, at least one of the

compartments comprising a container as claimed in any preceding claim.

- 5 8. A multi-compartment container as claimed in claim 7 in
 which the at least first and second compartments are
 connected by a connecting web.
- 10 9. A dual compartment container as claimed in claim 8 in
 which the first and second compartments and the
 connecting web are molded, ideally injection molded, in
 one piece.
- 15 12. A container, or a multi-compartment container,
 substantially as hereinbefore described with reference
 to the accompanying drawings.



Application No: GB 9815660.7
Claims searched: 1 to 12

Examiner: Mike Henderson
Date of search: 22 September 1998

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.P): B8D (DSA DSR1 DSR2 DSS DSX1)

Int CI (Ed.6): B65D 1/32

Other: ONLINE:WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2176765A (DRUMMOND) (Whole disclosure relevant)	1 to 6
X	GB 1349294 (VYNOL PAINTS PTY LTD) (Whole disclosure relevant)	1 to 3
X	GB 877321 (THE GILLETTE CO) (Fig.2 & corresponding description particularly relevant)	1 to 3 & 7 to 9
X	GB 798338 (CRYSTAL PRODUCTS CO LTD) (Whole disclosure relevant)	1 to 6
X	WO 96/22919A1 (LAMEPLAST SRL) (Whole disclosure relevant)	1 to 6
X	US 3580427 (CLARKE) (Whole disclosure relevant)	1 to 6

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